

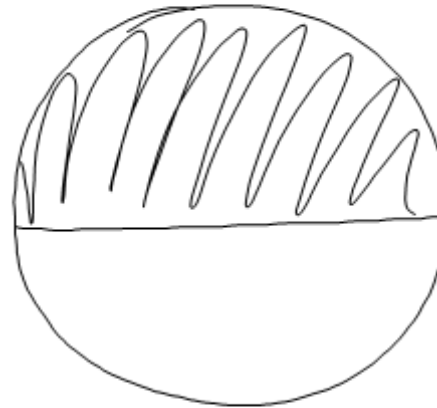
$$A = \pi r^2 \quad A_{\text{sect}} = \frac{\theta}{2\pi} \cdot \pi r^2 = \frac{\theta r^2}{2} \quad \theta = \text{radians} \quad r = \text{radius}$$

$$A = \frac{1}{2} \theta r^2$$



$$\frac{90}{360} = \frac{1}{4} \cdot 24 = 6$$

$$16 \cdot \frac{50}{360} = \frac{\cancel{x}}{\cancel{16}} \cdot 16$$



$$A = 16u^2$$

$$\frac{50}{360} \cdot 16 = 2.2$$

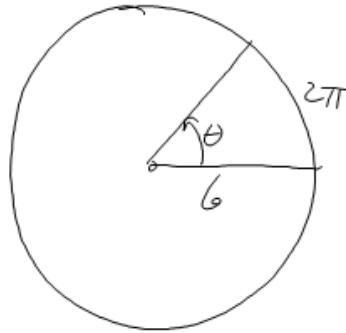
$$\frac{180}{360} = \frac{1}{2} \cdot 16 = 8$$



$$A = 16u^2$$

3.2 #27)

$$\text{Area} = \frac{\theta r^2}{2}$$



$$s = r\theta$$

$$\frac{2\pi}{6} = \frac{6 \cdot \theta}{6}$$

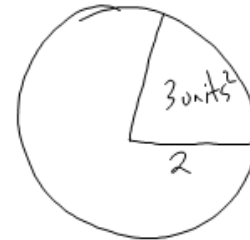
$$\theta = \frac{\pi}{3}$$

$$A = \frac{\theta (6)^2}{2}$$

$$A = \frac{\frac{\pi}{3} (6)^2}{2}$$

$$A = \frac{\frac{\pi}{3} \cdot \frac{36}{1}}{2} = \frac{36\pi}{3} = \frac{12\pi}{2} = \boxed{6\pi}$$

#29



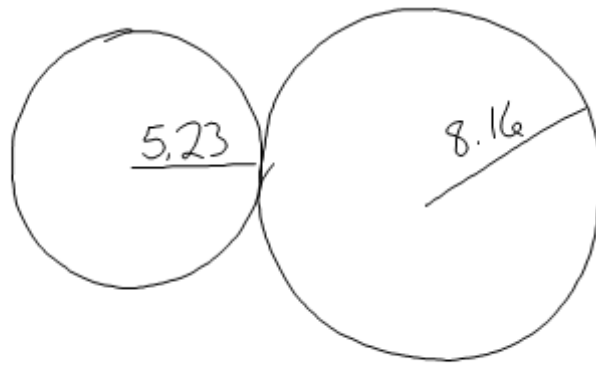
$$A = \frac{\theta r^2}{2}$$

$$A = \frac{\theta (2)^2}{2}$$

$$3 = 2\theta$$

$$\boxed{\theta = 1.5}$$

3.2 #21



Smaller rotates  
 $60^\circ$

$$S_s = r_s \theta_s$$

$$S_B = r_B \theta_B$$

! \* Key  $S_s = S_B$

$$r_s \theta_s = r_B \theta_B$$

$$(5.23) \left( \frac{\pi}{3} \right) = 8.16 \cdot \theta_B$$

$$\frac{5.23 \cdot \frac{\pi}{3}}{8.16} = \theta_B \approx 0.67 \text{ radians}$$

$$\frac{\pi}{180} = \frac{0.67}{x} \approx \boxed{38.4^\circ}$$

3.2 (23)

$$r_{\text{ped}} \theta_{\text{ped}} = r_{\text{back}} \theta_{\text{back}}$$

$$\downarrow$$

$$(4.72) \left( \frac{\pi}{180} \right) = (1.38) (\theta)$$

$$\theta = \frac{4.72 \pi}{1.38} \approx 10.75 \text{ radians}$$

$$s = r \theta$$

$$s_{\text{wheel}} = 13.6 \cdot 10.75$$

$$s_{\text{wheel}} = 146.1 \text{ in}$$

